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ıble 1. Changes to Rel B RBR Class - RTM baseline 01-17-97

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| )SD0010#B | 6312 | mission essential | FOS \| CSMS | operational | test | unverified | test | unverified | 96-0956A | ECS shall use and support the Space Network (SN), via the EDOS/EBnet interface, to obtain the forward and return link data communications needed to achieve full end-to-end ECS functionality. | ~~B:~~ ONLY THE GSFC AND LARC DAACS WILL INTERFACE WITH EDOS | |
| )SD0760#B | 7110 | mission critical | FOS \| CSMS | functional | demo | unverified | demo | unverified | 96-0956A | Each ECS element shall support end-to-end EOS system testing and fault isolation. | ~~B:~~ FULL AM-1 END-TO-END TESTING | |
| )SD1502#B | 6319 | mission critical | FOS \| SDPS \| CSMS | interface | demo | unverified | demo | unverified | | ECS elements shall use EBnet for data communications for the following types of data:<br>a. Production data sets (Level 0 data)<br>b. Expedited data sets<br>c. Real-time data (for health and safety)<br>d. Command data<br>e. Data requested from back-up archive<br>f. TDRSS schedule requests<br>g. Data exchange with the FDF<br>h. Production Data Transfers between DAACs<br>i. Management Data exchange with SMC<br>j. Data Products Exchange with ADCs, IPs, and Others | ~~B:~~ To support AM-1 operations. EBnet COMMUNICATIONS BETWEEN THE GSFC DAAC AND FDF | Current understanding has the ORNL ESN support ESnet (Energy Science Network) fo connectivity of ORNL DAAC to ECS and users via the Internet; and most of network traffic to/from ORNL as user traffic (not production).<br>At GSFC the ESN intrasite communications include the SMC and EOC/ICC (FOS) for management data exchanges.<br>The LaRC ESN includes support to use the Campus LA for SAGE.<br>Item j. "Others" includes TSDIS/GSFC data product exchanges. |
| )SD1600#B | 6220 | mission essential | FOS \| CSMS | interface | test | unverified | test | unverified | | The ECS elements that interface with EDOS elements shall exchange element level status data with EDOS. | ~~B:~~ OTHER EDOS/EOC STATUS (AS APPLICABLE). STATUS EXCHANGES BETWEEN GSFC + LARC DAACS & EDOS; ONLY THE GSFC AND LARC DAACS WILL INTERFACE WITH EDOS. | |
| )SD1607**#B** | 8879 | mission ~~essential~~ critical | SDPS \| CSMS | interface | test | unverified | test | unverified | | ECS shall receive data from near term Earth Probe missions to include the following as a minimum:<br>a). TRMM data for archive and distribution<br>b). Landsat 7 data for archive and distribution including IGS metadata and browse. | | |
| )SD1703**#B** | 8886 | mission essential | SDPS \| CSMS | interface | demo | unverified | demo | unverified | | ECS shall provide maintenance and operations interfaces to the DAACs to support the functions of:<br>a). System Management<br>b). Science Algorithm Integration<br>c). Product Generation<br>d). Data Archive/Distribution<br>e). User Support Services<br>f). System Maintenance | Users Support Services are provided through the same interfaces available to the users community for the V1 Client. | |
| )SD1705**#B** | 8893 | mission ~~fulfillment~~ critical | SDPS \| CSMS | procedural | analysis | unverified | analysis | unverified | | ECS shall support interfaces to DAAC Unique components. | ~~B: ASF SAR interface testing, CIESIN interoperability. For compliance see DID207.~~ | |
| )SD1710**#B** | 8897 | mission | SDPS \| CSMS | interface | demo | unverifi | test | unverifi | | ECS elements shall exchange with ADCs/ODCs, such as NOAA and other data | ~~B:~~ 2-way interoperability | |

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| | | fulfillment | | | | ed | | ed | | processing and archiving facilities, information including the following:<br>a. Directories<br>b. Product Orders<br>c. Order Status<br>d. Science Data<br>e. Management Data | | |
| )SD2100#**B** | 8908 | mission ~~essential~~ critical | FOS \| SDPS \| CSMS | procedural \| security | inspection | un-verified | inspection | un-verified | | The ECS technical security policy planning shall be comprehensive and shall<br>cover at least the following areas:<br>a. Applicability of the C2 Level of Trustedness as defined by the NSA<br>b. Applicability of the C2 Object Reuse capability<br>c. Discretionary control and monitoring of user access<br>d. ECS communications, network access, control, and monitoring<br>e. Computer system "virus" monitoring, detection, and remedy<br>f. Data protection controls<br>g. Account/privilege management and user session tailoring<br>h. Restart/recovery<br>i. Security audit trail generation<br>j. Security analysis and reporting<br>k. Risk analysis | Compliance demonstrated in DID 214/SE1, 215/SE3 and 514/PA2. | Reference subparagraph a. "Applicability of the C2 Level of Trustedness as defined by the NSA" and subparagraph b "Applicability of the C2 Object Reuse capability" is not applicable to the ECS project. NASA Automated Information Security Handbook, NHB 2410.9 is applied. Also reference subparagraph k, NHB 2410.9, "Risk Analysis" documented in 215/SE3 and 514/PA2. Additional programmatic security risk items are documented in CDR 210/SE3. |
| )SD3490#B | 7956 | mission fulfillment | FOS \| SDPS \| CSMS | RMA | demo | un-verified | demo | un-verified | 96-0980 B | Reliability statistics for ECS shall be collected and monitored using the Mean<br>Time Between Maintenance (MTBM) for each component and operational<br>capability. | The FOS/EOC requirement is met through the use of CSMS services.<br><br>~~B: All DAACs~~ | |
| )SD3700#**B** | 8928 | mission essential | FOS \| SDPS \| CSMS | RMA | analysis | un-verified | analysis | un-verified | | ECS functions shall have an operational availability of 0.96 at a minimum (.998<br>design goal) and an MDT of four (4) hours or less (1.5 hour design goal), unless<br>otherwise specified. | ~~Does not apply to data processing function. Product generation is applicable to EOSD4010 and EOSD4020.~~ Applies to HW CIs only. Refer to DID 515-CD-002-002 for compliance methodology. | This requirement covers equipment including:<br>a. "Non-critical" equipment configured with the critical equipment supporting the functional capabilities in the requirements.<br>b. Equipment providing other functionality not explicitly stated in the RMA requirements.<br>System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD3900#**B** | 8956 | mission critical | SDPS | RMA | analysis | un-verified | analysis | un-verified | | The SDPS function of receiving science data shall have an operational<br>availability of 0.999 at a minimum (.99995 design goal) and an MDT of two (2)<br>hours or less (8 minutes design goal). | ~~B~~: L0 data | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD3910#B | 8957 | mission critical | SDPS | RMA | test | un-verified | test | un-verified | | The switchover time from the primary science data receipt capability to a backup<br>capability shall be 15 minutes or less (10 minutes design goal). | AM-1 | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD3920#B | | missio | SDPS | RMA | analy | un- | analy | un- | | The SDPS function of archiving and distributing data shall | | System acceptance shall be |

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| | 8958 | n essential | | | sis | verified | sis | verified | | have an operational availability of 0.98 at a minimum (.999999 design goal) and an MDT of two (2) hours or less (9 minutes design goal). | | based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD3930#B | 8959 | mission essential | SDPS | RMA | analysis | un-verified | analysis | un-verified | | The user interfaces to Information Management System (IMS) services at individual Distributed Active Archive Center (DAAC) sites shall have an operational availability of 0.993 at a minimum (.9997 design goal) and an MDT of two (2) hours or less (1.6 hour design goal). | | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD3940#B | 8960 | mission essential | SDPS | RMA | analysis | un-verified | analysis | un-verified | | The SDPS function of Information Searches on the ECS Directory shall have an operational availability of 0.993 at a minimum (.9997 design goal) and an MDT of two (2) hours or less (1.4 hour design goal). | | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD3960#B | 8961 | mission essential | SDPS | RMA | analysis | un-verified | analysis | un-verified | | The SDPS function of Metadata Ingest and Update shall have an operational availability of 0.96 at a minimum (.999999 design goal) and an MDT of four (4) hours or less (6 minutes design goal). | | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD3970#B | 8962 | mission essential | SDPS | RMA | analysis | un-verified | analysis | un-verified | | The SDPS function of Information Searches on Local Holdings shall have an operational availability of 0.96 at a minimum (.999999 design goal) and an MDT of four (4) hours or less (6 minutes design goal). | | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD3980#B | 8963 | mission essential | SDPS | RMA | analysis | un-verified | analysis | un-verified | | The SDPS function of Local Data Order Submission shall have an operational availability of 0.96 at a minimum (.999999 design goal) and an MDT of four (4) hours or less (6 minutes design goal). | | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD3990#B | 8964 | mission essential | SDPS | RMA | analysis | un-verified | analysis | un-verified | | The SDPS function of Data Order Submission Across DAACs shall have an operational availability of 0.96 at a minimum (.999999 design goal) and an MDT of four (4) hours or less (6 minutes design goal). | | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD4000#B | 8965 | mission essential | SDPS | RMA | analysis | un-verified | analysis | un-verified | | The SDPS function of IMS Data Base Management and Maintenance Interface shall have an operational availability of 0.96 at a minimum (.999999 design goal) and an MDT of four (4) hours or less (6 minutes design goal). | | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD4010#B | 8966 | mission essential | SDPS | RMA | analysis | un-verified | analysis | un-verified | | Each computer providing product generation shall have an operational availability of 0.95 at a minimum (.9995 design goal). | ~~B:~~ AM-1, TRMM | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |
| )SD4030#B | 8968 | mission critical | CSMS | RMA | analysis | un-verified | analysis | un-verified | | The SMC function of gathering and disseminating system management information shall have an operational availability of .998 at a minimum (.999998 design goal) and an MDT of 20 minutes or less (5 minutes design goal), for critical services. | | System acceptance shall be based only on specified requirements and not design goals. Reference F&RPS (423-41-02) paragraph 1.5. |

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| )SD4035#B | 6321 | mission critical | CSMS | RMA | test | un-verified | test | un-verified | | The ESN shall have no single point of failure for functions associated with site-specific network databases and configuration data. | ~~B: all DAACs and EOC~~ | |